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Vol. 35, No.9 April 26, 1996

April 27, 1996 - KARS I

Spaceport News

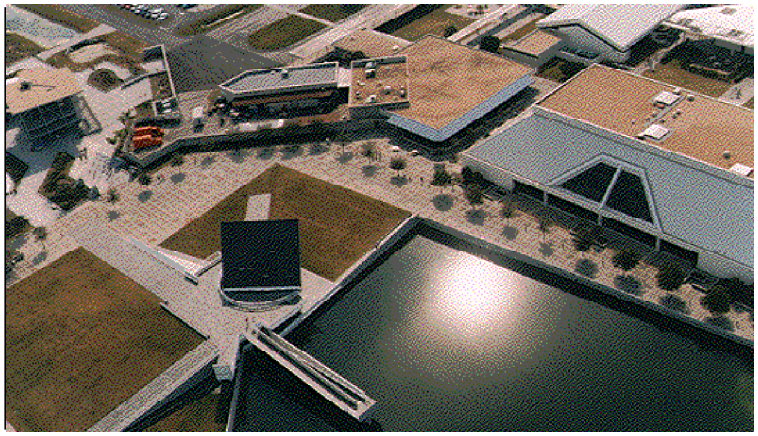
America's gateway to the universe. Leading the world in preparing and launching missions to planet Earth and beyond.

John F. Kennedy Space Center

THE VEHICLE ASSEMBLY BUILDING stands majestically amidst the surrounding land and seascape in this view from the southeast of the Launch Complex 39 Area.

Aerial artistry: KSC from above

Kennedy Space Center's photo imaging, provided by The Bionetics Corporation, offers an extensive collection of photos documenting every facet of work at KSC, from the study of microscopic organisms used in Shuttle experiments to processing activities in the mammoth structures where space planes and payloads are assembled. In this issue *Spaceport News* is featuring a selection of newly completed aerial views shot by Bionetics/ Public Affairs photographer George Shelton. We believe they reflect the scenic beauty of KSC's shared existence with our natural surroundings.



SUNLIGHT GLISTENS off the pool adjacent to the Astronaut Memorial at Spaceport USA in the photo above. At far right, Saturn Causeway and the crawlerway cut parallel paths to Launch Pad 39B in this view from the south. At right, a Saturn IB launch pad from the Apollo era, located at Complex 34, provides a reminder of the past.

Schedule of events

8 a.m. - noon -- Sports tournaments (Softball field, volleyball courts, tennis courts)

10 - 11:15 a.m. -- Community Band of Brevard and opening ceremony

10 a.m. - 2 p.m. -- Car show; Rocket design contest

10 a.m. - 3 p.m. -- Children's pony rides

10 a.m. - 4 p.m. -- Ethnic food and crafts booths; Children's rides and games; Children's petting zoo

11 a.m. - noon -- Reflections: Pavilion II; Spaceman

11 a.m. - 1 p.m. -- "People's Choice" chili judging

11 a.m. - 2 p.m. -- Children's face painting; balloon sculptures

11 a.m. - 3 p.m. -- Dunking booth open

11:15 a.m. - 12:15 p.m. -- Herbie K Dancers - Pavilion I

11:30 a.m. -- Judging of storefront chili displays starts

Noon - 2 p.m. -- Olympic events: Softball Field I

12:15 - 1:15 p.m. -- Astronaut Band "Max Q": Pavilion II

12:30 - 1:30 p.m. -- Mayalinda Marimba band: Pavilion I

1:15 - 1:45 p.m. -- Chili judging by official judges starts

1:30 - 2:30 p.m. -- Bravo Hotel: Pavilion II

1:45 - 2 p.m. -- Chili cookoff winners announced

1:45 - 2:30 p.m. -- Japanese Traditional Drum: Pavilion I

2 - 2:30 p.m. -- Magic act

2:30 - 2:45 p.m. -- Sports/Olympic tournament winners announced: Pavilion I

2:30 - 3 p.m. -- Rocket launch: Field I

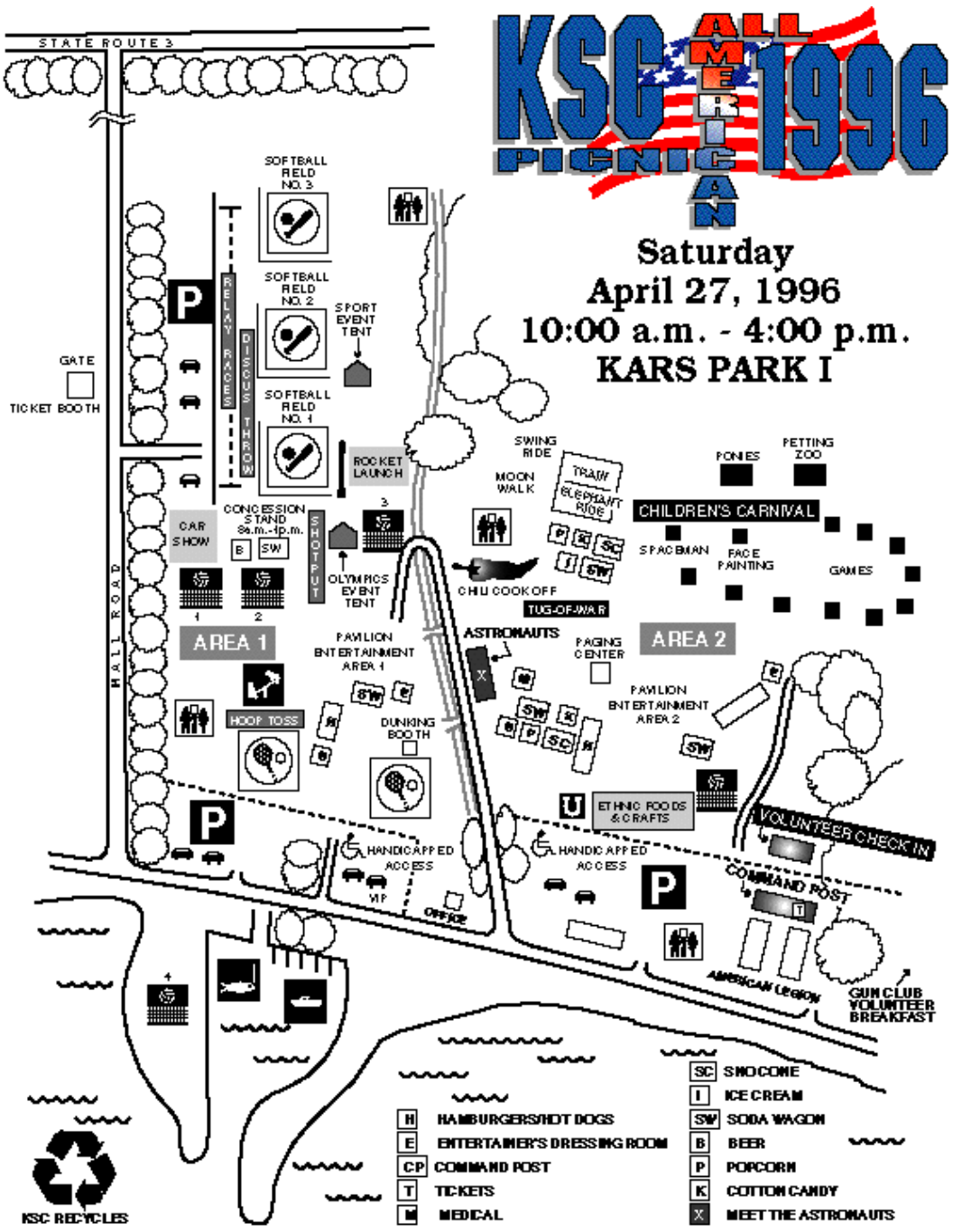
2:45 - 3:30 p.m. -- Talako Indian Dancers: Pavilion I

2:45 - 4 p.m. -- Hired Guns: Pavilion II

3 - 3:30 p.m. -- Free ice cream

3 p.m. -- NASA astronauts sign photos

3:30 p.m. -- Ethnic food and craft booths "Creative Decoration" contest winner announced



Annual picnic this weekend at KARS I

by George Diller

KSC employees can find plenty of ways to unwind at the All American Picnic at KARS Park Saturday, April 27 from 10 a.m. to 4 p.m. Tickets will be available at the gate for $4 for adults and $3 for children three to 12 years of age. Children under age three will be admitted free.

The ticket price includes admission to the park, lunch and drinks, entertainment and all the children's activities. An additional ticket for the traditional Chili Cook-Off is a dollar more.

Center Director Jay Honeycutt will lead the opening ceremonies, which will feature precision sky divers, at 10 a.m.

Events will include more than 10 performances by bands and dance groups, including Max Q, a rock band made up of astronauts; a car show; an ethnic food and crafts booth; the NASA Kennedy Management Association (NKMA) dunking booth; and a variety of sports and children's events.

The picnic is sponsored by the Payload Operations Directorate and all KSC employees and their families may attend.

New way of doing business leading to changes at KSC

NASA's new way of doing business is becoming apparant at Kennedy Space Center as changes are taking place in anticipation of the fall start of the Space Flight Operations Contract (SFOC).

Several announcements made in recent weeks highlight the fact that change is coming, said James L. Jennings, director of the Administration Office.

Although the contract between NASA and the single prime contractor United Space Alliance (USA) is not scheduled to take effect until Oct. 1, the transition work has already begun.

On April 12, NASA executed a novation agreement between the two parties and modified the existing Shuttle Processing Contract (SPC) to recognize USA's successor interests.

In essence the agreement allows USA to begin transition work, including the rebadging of former Lockheed Martin Space Operations Company and Rockwell International Corp. employees, before the contract formally begins, Jennings said.

The agreement does not affect the day-to-day operations at KSC, contract terms and conditions, or the roles and responsibilities of civil service employees in managing the SPC or the award fee evaluation process.

The arrangement will remain in effect until Sept. 30 when the SFOC is awarded.

Employee support requested

In a letter informing employees of the arrangement, Center Director Jay Honeycutt requested support for the coming changes.

"The KSC technical and procurement support team responsible for this effort is being formed," he said.

"This team will be dedicated to successful implementation of this program while ensuring that the vital interests of both KSC and the Agency are protected."

In a related move the Shuttle Operations Directorate has been reorganized to conform to the management structure necessary for the transition to the SFOC. The directorate is renamed the Shuttle Processing Directorate.

The second level Vehicle Engineering Directorate is renamed Process Engineering.

The Shuttle Processing and Operations Office has been combined with the Ground Systems sub-directorate to form the Process Integration Directorate.

That position, which is at the Senior Executive Staff level, will be advertised, Jennings said.

In other organizational changes, the Space Station Launch Site Support Office is redesignated as the International Space Station Launch Site Support Directorate. And the Payload Operations Directorate is renamed the Payload Processing Directorate.

And, in a reassignment made to expedite space station hardware testing and integration, John (Tip) Talone has been named special assistant to the center director.

In another personnel change, Personnel Officer Bev Merrilees has announced that she will take advantage of one of the new Careers Plus retirement options for civil service employees.

She will retire May 3 and return a month later as a rehired annuitant (see related story). Ken Aguilar, deputy chief of the Personnel Office, will take over her position when she leaves.

Although changes are occurring rapidly at KSC, they are not yet as dramatic as those recently announced at NASA Headquarters. Employees there were notified April 17 that a plan is being developed to accelerate the downsizing of that staff from 1,430 positions currently to 650-700 by October 1997.

The new plan anticipates a Reduction in Force to be completed by Oct. 1, 1997.

The new plan increases the target reduction by approximately 400 employees and accelerates the timetable for completing the reduction.

NASA Administrator Dan Goldin called the news of the reductions "disturbing and unwelcome" but said he wanted to keep employees informed so they could make necessary career decisions.

Merrilees takes phased retirement option

Kennedy Space Center Personnel Officer Bev Merrilees will soon be taking advantage of one of the new retirement options her office began offering last month.

Merrilees, who has 36 years of federal service, said she began to study the Careers Plus phased retirement option shortly after it became available at KSC and decided that professionally and financially it made sense for her.

"I feel really good about it," she said.

Merrilees will retire May 3 but will return a month later as a re-employed annuitant. She will work Tuesdays through Thursdays on special projects in the Administration Office. Merrilees will be able to work a maximum of 1,040 hours a year for up to two years. In addition to her annuity she will receive an hourly rate which is based on half of the difference between her salary at retirement and her annuity.

MERRILEES

She said since she had been thinking about retirement anyway, the option was especially appealing since it will allow her to come back and finish some projects she had been working on. And the addition to her pension fund will provide a "little cushion," she said.

Merrilees was staffing branch chief with the Department of the Army when her husband, Bob, transferred to KSC in January 1967. She began her career at KSC as a personnel clerk in the records section and became personnel officer in February 1993. Her husband will continue in his position as community relations specialist in the Protocol and Special Events branch of the Public Affairs Office.

Mars symposium planned

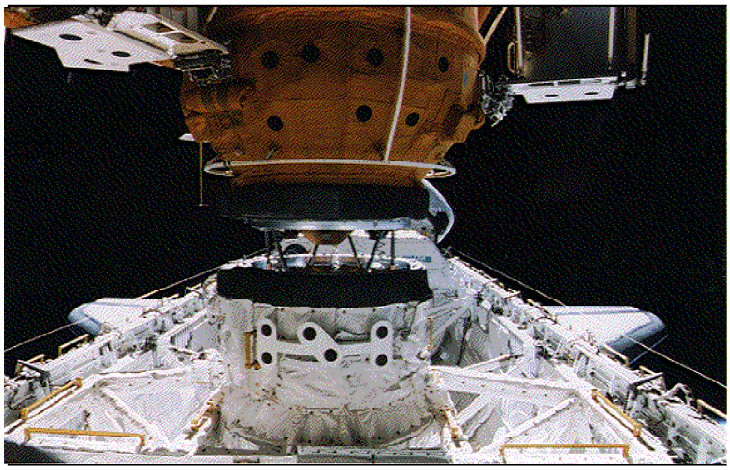
A Mars symposium is scheduled to be held July 18 through 19 at the National Academy of Sciences in Washington, D.C.

The symposium will be hosted by NASA, the Planetary Society and the Lockheed Martin Corp. NASA Administrator Dan Goldin and Dr. Carl Sagan have been invited to speak.

Dr. Mike Carr, former Viking Orbiter Imaging Team Leader, and others will summarize current knowledge of Mars and discuss future scientific exploration, including the coming Pathfinder and Discovery missions.

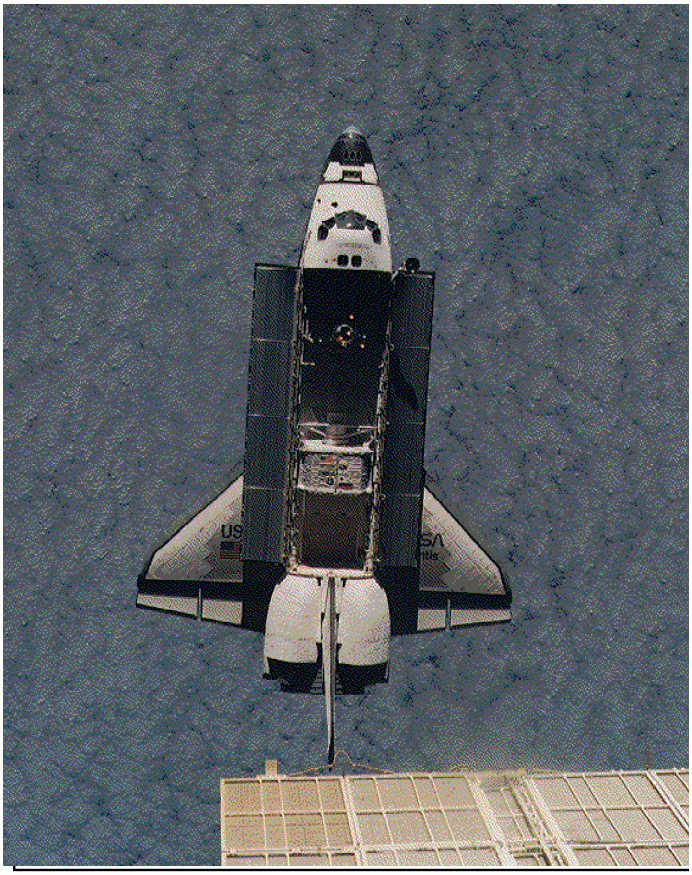
For more information, contact Judy Cole, symposium coordinator, Science and Technology Corp., 101 Research Drive, Hampton, Va., 23666, (804) 865-7604 (voice), or at via e-mail at cole@stcnet.com.

STS-76 delivers dream c



THE ORBITER DOCKING SYSTEM (ODS) and the Docking Module (DM) on Russia's Mir space station appear near the center of this frame, as the Space Shuttle Atlantis and Mir link in Earth orbit on March 23, at about 240 statute miles altitude.

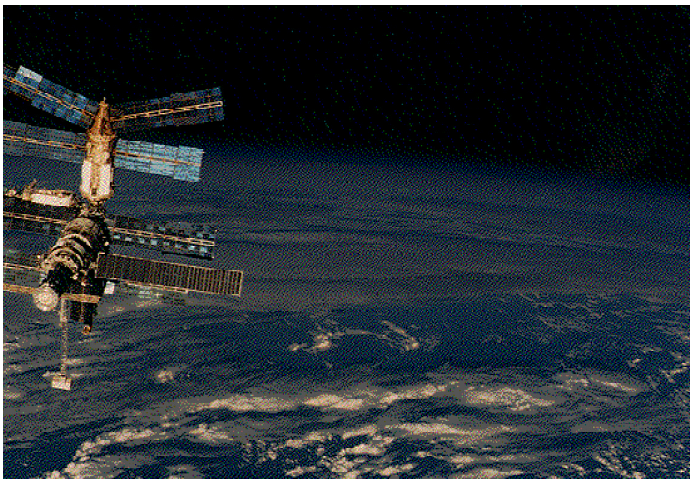
JOINING HER new cosmonaut crewmates, Shannon Lucid helps with an inventory of new food supplies in the base block module of the Mir. Yuri Onufrienko, Mir 21 mission commander, is in the foreground, and Yuri Usachev, flight engineer, is in back.



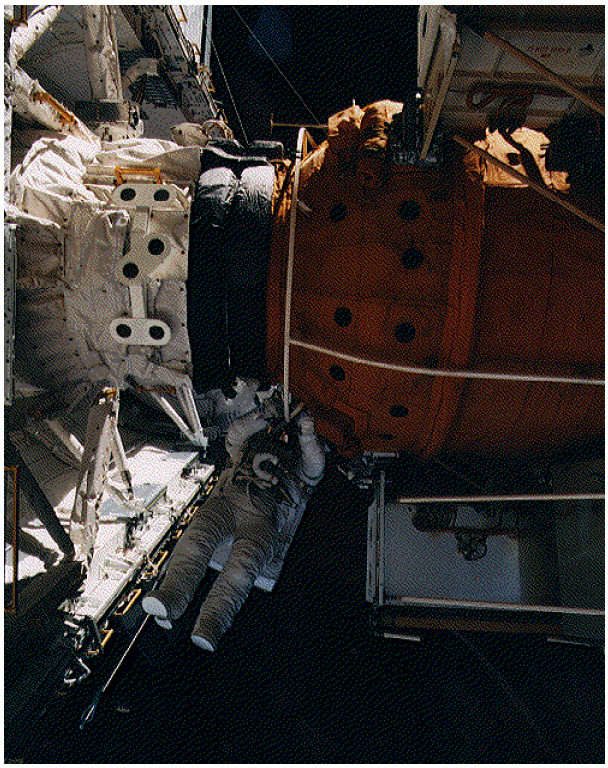
BACKDROPPED against a "floor" of clouds, this view of Atlantis was taken by the Mir 21 cosmonaut crew members onboard the Mir space station, during rendezv and docking operations March 23. Part of a solar panel connected to the Mir is s in the foreground. The Orbiter Docking System, the connective tunnel and the Space module can be seen in Atlantis' cargo bay. With the subsequent delivery of astro Shannon Lucid to the Mir, the Mir 21 crew grew to three, as the mission speci quickly became a cosmonaut guest researcher. She will spend approximately days on Mir before returning to Earth.

CONTINUING an on-orbit tradition, astronaut Kevin Chilton, right, STS-76 mission commander, shakes hands with cosmonaut Yuri Onufrienko, Mir 21 commander, in the tunnel connecting Atlantis with Mir.

‹ing with Mir



GAINST a massive arrary of clouds over the south Pacific Ocean and the Tasman Mir space station is pictured from Atlantis' aft flight deck. The spacecraft were in ess of making their third docking in Earth orbit.



ASTRONAUT Michael R. (Rich) Clifford, mission specialist, works at a restraint bar on the Docking Module of the Mir space station during a March 27 spacewalk. The extravehicular activity (EVA) of astronauts Clifford and Linda M. Godwin marks the first spacewalk while the Mir and Shuttle spacecraft were docked.

Comet Hyakutake offers eyeful to KSC astronomy, photo buffs

As Comet Hyakutake made a clear impression in area skies during the last weeks of March, several of Kennedy Space Center's astronomy and photography enthusiasts made the most of the rare opportunity by spending long late hours attempting to capture the perfect image of the spectacle. Pictured below are some that succeeded.

BIONETICS CORPORATION photographer George Shelton shot this image at 12:49 a.m. March 24 from his home on Merritt Island. He used a 135-mm telephoto lens set at f2.8 and 400 ISO film. The exposure was three minutes and 15 seconds.

DR. G.W. HOFFLER, deputy director of the Biomedical Operations and Research Office, submitted this photo taken by his son-in-law, Clint Rocknell, in Bonifay, FL. The picture was taken March 22 with a 28 mm lens and a three minute exposure.

JOHN W. SIGH JR. of USBI shot this view at 1:30 a.m. March 25 during the comet's closest approach to Earth. He used a 50 mm lens set at f1.7 for five minutes.

Workers lend osprey helping hands, crane

by George Diller

U.S. Fish and Wildlife Service personnel took their job to new heights last week as they coordinated the relocation of an osprey nest that was threatened by the refurbishment of the 150-foot antenna calibration tower it was perched on.

The nest, which contained two hatchlings, was moved to a wooden pole with a platform atop. The structure was built according to Wildlife Service specifications and erected by a team of EG&G personnel about 300 feet from the tower. Because the osprey is a protected species, a state permit was obtained to move the hatchlings and the nest.

Wildlife Service personnel approached the nest using a bucket crane and placed the two hatchlings in a box. Then the top section of the calibration tower which was supporting the nest was carefully removed and lowered to the ground. Wildlife Service workers then moved the nest, placing it atop the pole. The parent birds returned to the nest in about 40 minutes and resumed nurturing the hatchlings.

WAYNE LINDSEY, a U.S. Fish and Wildlife Service employee, places an osprey hatchling in its relocated nest. David Swartz of Allied Signal assists.

Work to refurbish the tower began the same day, as soon as the birds were relocated.

The tower is being completely reconstructed by a team from Allied Signal Technical Services Corporation, the MILA tracking station contractor.The tower holds antennas which are used to calibrate the 9-meter S-Band tracking antennas at MILA, and also a microwave antenna which relays a signal between MILA and the Ponce De Leon Inlet tracking station in New Smyrna Beach with voice, data and telemetry for the Space Shuttle. The work will be finished in time to support the STS-77 launch in mid-May.

Community leaders

CENTER DIRECTOR Jay Honeycutt, right, and Kent Black, chief executive officer of United Space Alliance, find a moment to talk during the annual community leaders breakfast held April 19 a the Kennedy Space Center Visitor Center. More than 400 community leaders from Brevard County and the state of Florida attended the breakfast and heard briefings from Honeycutt and Black on 1995 space center milestones, the short and long-term future projections of the space program and the impact those plans might have on the local community. Following the briefings, attendees were invited to participate in a bus tour of KSC.

Space Shuttle insulation cools NASCAR driver in Daytona test

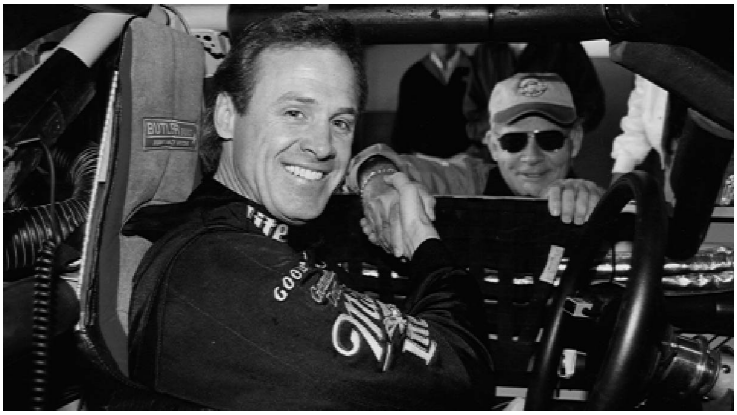
By Chuck Weirauch

Space Shuttle insulation reduced temperatures in the cockpit of NASCAR driver Rusty Wallace's Ford Thunderbird by 30 to 50 degrees during a high-speed test at Daytona International Speedway recently.

A KSC Thermal Protection System (TPS) team had designed and installed thermal barriers in Wallace's car made of scrap TPS blanket material late last year at the space center. However, this was the first fully instrumented test to determine how well the heat reduction system would work under race track conditions.

"The data we have collected from thermocouples inside and outside the car indicate that the material really did its job," said NASA TPS Facility manager Bruce Lockley. "I also could really feel how much hotter it was inside the car when we ran it without the blankets."

Although blankets were initially installed both inside and outside the vehicle, during the test, Wallace ran 20 2.5-mile laps with only the external elements of the TPS system in place. He then drove the same distance with the thermal barriers removed. Computer-based sensors and data recorders were onboard to measure temperatures at hot spots around the car throughout the experiment.



CENTER DIRECTOR Jay Honeycutt, right, shakes hands with NASCAR driver Rusty Wallace. Wallace's Ford Thunderbird was equipped with scrap thermal barriers for a heat reduction test.

"One critical point is just below the driver's foot, which rests on the floorpan above the car's exhaust system," said Martin Wilson, project manager at the TPS Facility for Rockwell International. "We measured a temperature of 108 degrees Fahrenheit at this point with the TPS material in place and 145 degrees with the blanket material removed. The temperature reduction will be even greater when we run tests with the interior insulation in place."

Another hot spot is near the driver's left elbow, Wilson said. With just the external insulation in place, the recorded temperature was 120 degrees. A blistering 260 degrees was reported without the insulation.

Experts have estimated that temperatures inside the driver's cockpit during a race can reach up to 160 degrees. Although drivers are cooled with forced air systems and protected by fire-retardant suits, they have been burned and blistered by the heat transferred through the engine firewall, transmission tunnel and floor into the cockpit.

In an attempt to improve conditions for his drivers, former NASCAR champion and NASCAR race team manager Bobby Allison approached Kennedy Space Center Director Jay Honeycutt to help find a solution. Roger Penske then agreed to have one of his cars serve as a testbed for new technology that could be adopted by NASCAR. The effort led to a NASA Space Act agreement between the space center and Penske Racing Inc. The Penske team agreed to test a TPS-equipped car under racing conditions. The KSC team will continue to work with Penske to conduct additional tests and to develop a thermal system that can be switched quickly from one car to another, Lockley said.

KSC helps establish technology center to nurture small businesses

by Joel Wells

Kennedy Space Center is assisting with the development of a new technology-based business incubation center geared toward nurturing small businesses and entrepreneurs.

"North Brevard has received the brunt of the defense industry's downsizing in this state. With a high-tech foundation already established in the area, we started thinking about ways to help existing companies and attract new ones," said Frank Kinney, executive director of Florida's Technological Research and Development Authority (TRDA).

Study establishes interest

Kennedy Space Center and BCC began discussions on the program in July 1995. KSC and TRDA then co-funded a feasibility study to determine the program's value to Brevard County. The program will be located at the BCC campus in Titusville.

The study, completed in January 1996, revealed many companies interested in low cost facilities and access to NASA laboratories and expertise. The study's results led to a decision to proceed with development plans for the Florida NASA Business Incubation Center. NASA and TRDA will co-fund the project.

Beyond the financial support, NASA is finding creative ways to make its technological expertise available to budding small businesses.

Managers are encouraging KSC personnel to volunteer their time and knowledge to the incubation center's customers.

Retirees encouraged to volunteer

Retirees can participate as well. "NASA-KSC personnel that plan to retire by Sept. 30, 1996 may have the option to return as re-employed annuitants under phased or trial retirement and offer their experience and knowledge base to the program," said Sharon Lowry, KSC retirement officer.

NASA is participating in the endeavor to accelerate and augment the KSC technology transfer mission.

"Our support of small businesses with our high technology infrastructure is expected to create new jobs and products in Brevard County and throughout Florida," said Kathleen Harer, KSC program manager.

BCC's contributions include a 10,000-square-foot facility, security, utilities, and maintenance support.

"BCC has been a community leader in economic development efforts and we're looking forward to another chance for community outreach," said Dr. Joe Lee Smith, president of BCC's Titusville campus.

The incubation center will provide small technology-based businesses and entrepreneurs with affordable office space, management advice and technical support. It will facilitate access to NASA expertise and facilities at KSC. Resident businesses will have access to BCC's library, computer labs, and shops.

The incubator is scheduled to open in June 1996. Companies, entrepreneurs, and business mentors interested in the program should call 267-0047.

Tenant application forms are available on the World Wide Web at http://technology.ksc.nasa.gov/FNBIC/. NASA KSC retirement candidates should call Sharon Lowry at 867-2514 for more information about working at the center.

Contractors receive safety awards

SEVERAL KENNEDY SPACE Center contractors were recoognized recently for their safety initiative efforts. The KSC Safety Initiatives Award Program promotes Continuous Improvement principles by focusing on planned improvements with established initiatives, milestones and success criteria that are developed in contractor award program plans. Safety Initiative Award recipients, above from left, are Don Reed, USBI; Jack Bokash, EG&G Florida, Inc.; Ronald Wetmore, Martin Marietta; Jimmy Rudolph, Lockheed Martin Space Operations Company; Jack Lamba, Lockheed Martin Space Operations Company; Caroline Zaffery, I-NET, Inc; and Mike Lewer, Rockwell International Corp. Center Director's Award receipients pictured at right, are Doug Britt of Dynamac Corp. and Sue Spector of McDonnell Douglas Space and Defense Systems.

KSC mission encompasses Earth, sea and space

A SOUTHWARD view from Launch Pad 39A provides a panarama of the Cape.

SOLID ROCKET boosters provide a geometric contrast to nearby holding tanks in the Hangar AF recovery area.

A PAYLOAD canister crosses the tracks as it is transported to Launch Complex 39A.

THE U.S. FISH AND WILDLIFE SERVICE'S manatee holding pens serve as a shining example of KSC's commitment to assisting area wildlife. The pens provide an area where injured and orphaned manatees can be rehabilitated before being released into their natural habitat.

John F. Kennedy Space Center

Spaceport News

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